

SUBCONTRACT MANAGEMENT PLAN

Overview

This Subcontractor Management Plan details the *SYTRONICS* approach to managing subcontractors for TSA II task orders. Table 401-1 depicts the six required functions for subcontract management that make up the *SYTRONICS* subcontract management process.

TABLE 401-1
SUBCONTRACT MANAGEMENT FUNCTIONS

SUBCONTRACTING RELATED FUNCTIONS	HIGHLIGHTS OF RELEVANT <i>SYTRONICS</i> PROCESSES
Planning/Assessing Needs	Preliminary assessment of needs/subcontractor capabilities prior to release of Task Order RFP.
Subcontractor Selection	Rapid “make-buy” decision. Application of objective selection criteria. Explicit consideration of risk.
Directing Subcontractors	Corporate level insight. Program level accountability. Task order level execution.
Subcontractor Coordination	Intensive use of electronic media. Program level A&I.
Subcontractor Integration	IPT forum at each delivery order level. Government involvement encouraged.
Controlling	Established standards, performance measurement, and corrective action. Supported by automated systems.

Assessing Needs and Planning for Subcontractors

The first step in determining the need for a subcontracted effort is to understand the required work. The *SYTRONICS* team evaluates task order requirements and breaks them down into manageable work packages. A work package can be a single service, hardware item, software functionality, a procurement of COTS item(s), or any combination thereof that could be broken up and accomplished by a single company.

A *SYTRONICS* Initial Resource Planning Group (IRPG) composed of *SYTRONICS* and its team members (selected members of the Executive Steering Group IPT) will evaluate internal and team capabilities are evaluated against work package requirements. Other sources may be considered as well and initial market research performed on potential external sources.

The IRPG makes an initial make-buy selection for each work package. Typically, *SYTRONICS* assigns work packages to potential sources using the following hierarchy: *SYTRONICS* internal, team members, preferred vendors, and finally an external source. However, there are a number of additional factors that must also be considered when developing these initial make-buy decisions. A sample of these considerations is included in Figure 401-1.

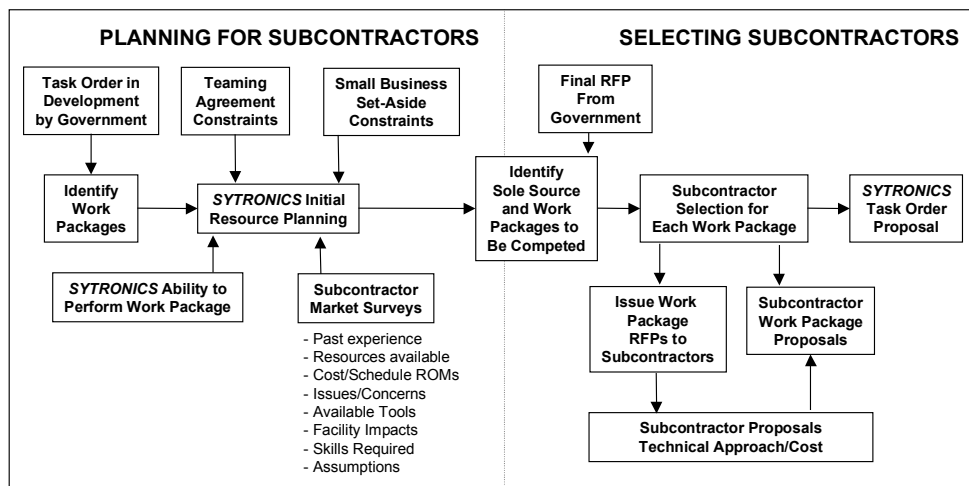


Figure 401-1. Make-Buy Decision Process

Extensive market research is conducted for work packages expected to be subcontracted. Additional market research can be conducted on work initially proposed for internal or team completion, if it is determined that there are other responsible qualified sources for those tasks.

A market survey consists of surveying potential sources for experience and resources available to accomplish the specified work packages. We provide the full set of work package descriptions to all team members so they have a "big picture" view of potential task, identify the areas we are considering for subcontracting, and ask them to identify the work package they could perform. For each work package, the potential sources respond with an information according to a supplied template requesting specifics for each work package: available resources, cost/schedule ROMs, their proposed approach or methodology, any issues, assumptions, special tools or skills required, and facilities requirements.

Responses to these inquiries will form the basis for the initial subcontracting plan. It is always desirable to have more than one responsible qualified source respond for each work package. Market survey responses that find qualified responsible sources to be one or none, or unknown COTS availability, will automatically trigger a second look at the make-buy decision. Make-buy decisions are continually revisited through the selection of subcontractors and vendors.

The *SYTRONICS* Team includes *SYTRONICS*, Teledyne Brown Engineering, FlightSafety, and FAAC. Table 401-2 shows the capabilities of each member in relation to the technical areas of the System Requirements Document (SRD).

TABLE 401-2
SYTRONICS TEAM FRD MATRIX

Functional Requirements Document Items		SYTRONICS	Teledyne Brown Engineering	FlightSafety	FAAC	Team Composite
3.1	Products and Services					
3.1.1	Training Systems					
3.1.1.1	Aircrew Training Systems (ATS)			X		X
3.1.1.2	Maintenance Training Systems (MTS)		X	X		X
3.1.1.3	Operations-Specific Training Systems (OTS)	X		X		X
3.1.1.4	Constructive Simulations	X	X	X		X
3.1.1.5	Embedded Training		X			X
3.1.2	Training Devices					
3.1.2.1	Aircrew Training Devices			X		X
3.1.2.2	System Training Devices	X		X		X
3.1.2.3	Mission Rehearsal Devices	X	X	X		X
3.1.2.4	Maintenance Training Devices	X	X	X		X
3.1.3	Subsystems					
3.1.3.1	Host Computational System	X	X	X		X
3.1.3.2	Visual Systems		X	X		X
3.1.3.3	Motion/Force Cueing Systems			X		X
3.1.3.4	Instructional Support Systems	X	X	X		X
3.1.3.4.1	Instructor Operator Stations (IOS)	X	X	X	X	X
3.1.3.4.2	Training Related Subsystems.	X	X	X		X
3.1.3.4.3	Training Management System (TMS)		X	X		X
3.1.3.4.4	Contractor Logistics Support(CLS)	X		X		X
3.1.3.5	Aircraft Simulations	X	X	X		X
3.1.3.5.1	Aircraft Subsystems	X	X	X	X	X
3.1.3.5.2	Aerodynamics	X	X	X	X	X
3.1.3.5.3	Mission Systems	X	X	X	X	X
3.1.3.5.3.1	Weapons	X	X	X	X	X
3.1.3.5.3.2	Simulated Loads	X	X	X	X	X
3.1.3.5.3.3	Command, Control, Communications, Computers and Intelligence (C4I)	X	X		X	X
3.1.3.5.4	Avionics	X		X	X	X
3.1.3.5.4.1	Electronic Warfare	X	X	X	X	X
3.1.3.5.4.2	Mission Computers/Operational Flight Programs	X		X	X	X
3.1.3.5.4.3	Communications/Navigation	X		X	X	X
3.1.3.5.4.4	Aircraft Monitoring and Status	X		X	X	X
3.1.3.5.5	Sensor Simulations	X	X	X	X	X
3.1.3.5.5.1	Radar		X	X	X	X
3.1.3.5.5.2	Imaging Infrared (IIR)		X	X	X	X
3.1.3.5.5.3	Laser Designation and Range-finding		X	X	X	X
3.1.3.5.5.4	Television Systems		X			X
3.1.3.6	Simulated Environment	X	X	X		X
3.1.3.6.1	Visual/Sensor Databases	X	X	X		X
3.1.3.6.2	Radio Environment Databases		X	X		X
3.1.3.6.3	Electronic Combat Environment	X	X	X	X	X
3.1.3.6.4	Weather		X	X		X
3.1.3.7	Maintenance Training Support Equipment	X	X	X		X
3.1.3.8	Trainer Diagnostics	X	X	X		X
3.1.3.9	Trainer Activity Monitoring	X	X	X		X
3.1.3.10	Mission Debrief Station	X	X	X		X
3.1.3.11	Safety Related Subsystems	X	X	X		X
3.1.4	Training Systems					
3.1.4.1	Training System Support Center (TSSC)			X		X
3.1.4.1.1	Sustaining Engineering	X	X	X		X
3.1.4.1.1.1	Modifications	X	X	X		X
3.1.4.1.1.2	Test Bed Operation, Modification, and Maintenance	X	X	X		X
3.1.4.1.1.3	Facility Engineering	X		X		X
3.1.4.1.1.4	Studies and Analyses	X	X	X		X
3.1.4.1.2	Database	X	X	X		X
3.1.4.1.3	Configuration Management	X	X	X		X
3.1.4.1.3.1	Documentation and Baseline Maintenance	X	X	X		X

Functional Requirements Document Items	SYTRONICS	Teledyne Brown Engineering	FlightSafety	FAAC	Team Composite
3.1.4.1.3.2 Stock, Store and Issue Center	X		X		X
3.1.4.2 Operations and Maintenance Services	X		X		X
3.1.4.2.1 Training System Operations	X		X		X
3.1.4.2.2 Training Device Maintenance	X		X		X
3.1.4.2.3 Support Equipment Maintenance	X		X		X
3.1.4.2.4 Product Support	X	X	X		X
3.1.4.2.5 Training Device Relocation	X		X		X
3.1.4.2.6 Training Device Disposal/Disposition	X		X		X
3.1.4.3 Logistics Support Package (LSP)	X		X		X
3.1.4.3.1 Spares	X		X		X
3.1.4.3.2 Trainer Support Equipment	X	X	X		X
3.1.4.3.3 Technical Data	X	X	X		X
3.1.4.4 Instructional Services	X	X	X		X
3.1.4.4.1 Instruction	X		X		X
3.1.4.4.2 Training Management			X		X
3.1.4.4.3 Curriculum Development	X	X	X		X
3.1.4.4.4 Courseware		X	X		X
3.1.4.4.5 Multimedia Studios	X	X	X		X
3.1.4.4.6 Classroom Equipment	X	X	X		X
3.1.4.4.7 Training Materials	X	X	X		X
3.1.4.4.8 Training Aids	X	X	X		X
3.2 Design Concept and Prototype Development					
3.2.1 Front End Evaluations	X	X	X		X
3.2.2 Technology/Product Evaluations	X	X	X		X
3.2.3 Technology Assessments and Forecasts	X	X	X		X
3.2.4 Training System Requirements Analyses (TSRA)	X	X	X		X
3.2.5 Training Effectiveness Evaluations	X	X	X		X
3.2.6 Integrated Risk Assessments	X	X	X		X
3.2.7 Aircraft Data Evaluations	X	X	X		X
3.2.8 Supportability Analyses	X	X	X		X
3.2.9 Cost and Schedule Estimates	X	X	X		X
3.2.10 Concepts of Operations (CONOPS)	X	X	X		X
3.2.11 Device/Subsystem Evaluations	X	X	X		X
3.3 Program Management/Systems Engineering					
3.3.1 Documentation	X	X	X		X
3.3.2 Facilities Planning and Engineering	X	X	X		X
3.3.3 Information Technology Services	X	X	X		X
3.3.4 Standardization	X	X	X		X
3.3.5 System Integration	X	X	X		X
3.3.6 Security	X	X	X		X
3.3.7 Government Furnished Property	X	X	X		X
3.3.8 Systems Engineering	X	X	X		X
3.3.9 Cost, Schedule, and Performance Control	X	X	X		X
3.4 Upgrades & Modifications					
3.4.1 Concurrency Upgrades	X	X	X		X
3.4.2 Maintenance Modifications	X	X	X		X
3.4.3 Technology Insertion	X	X	X		X
3.4.4 Training Enhancements	X	X	X		X
3.4.5 Commonality	X	X	X		X
3.5 Interoperability					
3.5.1 Network Operations	X	X	X		X
3.5.2 High Level Architecture (HLA)	X	X			X
3.5.2.1 Federation Object Models (FOM)	X	X			X
3.5.2.2 Simulation Object Models (SOM)	X	X			X
3.5.3 Modeling and Simulation	X	X			X
3.6 Qualification and Test					
3.6.1 Test Planning	X	X	X		X
3.6.2 Trainer Qualification and Test	X	X	X		X
3.6.3 Simulator Certification (SIMCERT)			X		X
3.6.4 Simulator Validation (SIMVAL)				X	X
3.6.5 Audits	X	X	X		X
3.6.6 Courseware Formative Evaluations		X	X		X
3.6.7 Courseware Summative Evaluations		X	X		X

Subcontractor Agreements

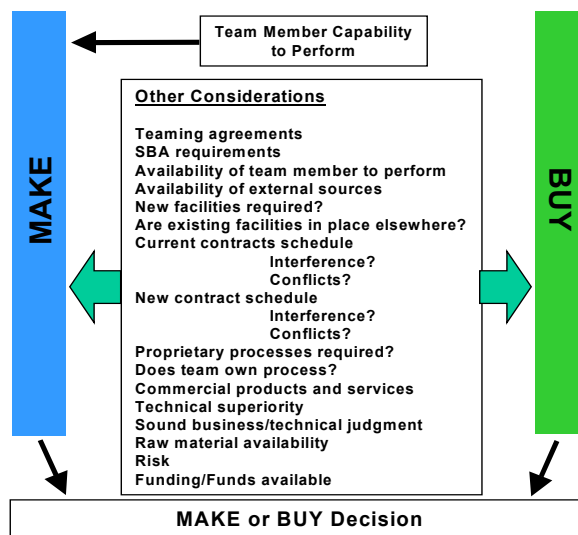
SYTRONICS has written teaming agreements on file with the following subcontractors: Teledyne-Brown Engineering (TBE), FlightSafety Services Corporation (FSSC), and FAAC. The full resources of FlightSafety International are available to *SYTRONICS* through FSSC. Copies of these agreements are provided as Attachments X (TBE), Y (FSSC), and Z (FAAC). Additionally, *SYTRONICS* has established a strategic alliance with TBE in which TBE has committed to assist *SYTRONICS* in expanding our existing automated tools and capabilities. A copy of the TBE commitment to *SYTRONICS* is included on page 6 of the introductory section of Volume II-Mission Capability.

Selection of a Subcontractor

The selection phase begins when the requirements are generally well understood and the Government releases its formal RFP. At this time, the initial make-buy plan and initial market surveys have been reviewed and scrubbed, and the process of selecting subcontractors begins.

The general process is to define the products/services, develop a delivery schedule, determine whether the team will accomplish the work internally or use external sources (a final make-buy decision), solicit multiple sources (with both technical and cost estimates), and make a selection. More specific details are depicted in Figure 401-2.

Figure 401-2. Make-Buy Decision Factors



Using the Requirements Analysis process, system level requirements are allocated down to derived requirements and grouped together into work packages. Delivery schedules are backed out of contract delivery schedules and attached to the development of each work package.

Initial subcontract planning is considered against the updated requirements and delivery schedules. Using the same make-buy process used in the planning phase described above and any additional market research that may be available, a final make-or-buy determination is made.

If a decision to make an item is made, then further activities are initiated to execute that work package within the company. Existing teammate's resources are evaluated and a team internal selection process is implemented. The detailed requirements and schedule will be sent to the team member for an overview of their proposed technical approach and a cost proposal. In some cases, two or more team members may be capable of providing the same end item, and these efforts will be "internally competed." Quick turnaround proposals will be evaluated against the criteria specified in the "mini" request for proposal. Selections will be made on the basis of capability, availability to meet schedule, and cost. Senior *SYTRONICS* leadership will make this evaluation with assistance from the program manager and the technical staff.

If the decision is made to buy the particular work package, Commercial-Off-The-Shelf (COTS) items are generally considered first. Quotes for COTS items are requested after a survey is made by technical and management personnel of the commercial sources in the particular marketplace. For purchases over \$2500, at least three quotes will be required if available. Selection is based on price, past performance, quality, and availability. A purchase order then implements the selection. The *SYTRONICS* purchasing department will handle the transaction details of the procurement for any COTS item.

If the procurement is for a development or unique, non-standard item, then preferred vendors and general market vendors are sent requests for proposals/quotes which contain statements of work, specifications, or purchase descriptions as the source documents against which to prepare their technical and cost proposals or quotes. Proposals are received, evaluated, and selection is made on the basis of the following criteria found in Figure 401-3.

Alternative selections are rank-ordered for rapid selection of alternative sources if the first preference becomes unable to deliver as requested. These solicitations are made by the *SYTRONICS* contracting office with technical assistance from the program manager and technical people working the project. Senior *SYTRONICS* managers approve all subcontract procurements. A contract file is maintained that identifies the item required, the selected source, a description of the item, its cost, and reports concerning significant or outstanding actions associated with selection, purchase, accomplishment, and delivery of the product. The contents of this file remain as an evaluation factor for future selection activities. This process assures efficient use of competitive procurement expertise, technical representation in the evaluation process, and then direct lines of communication in the specific procurement action.

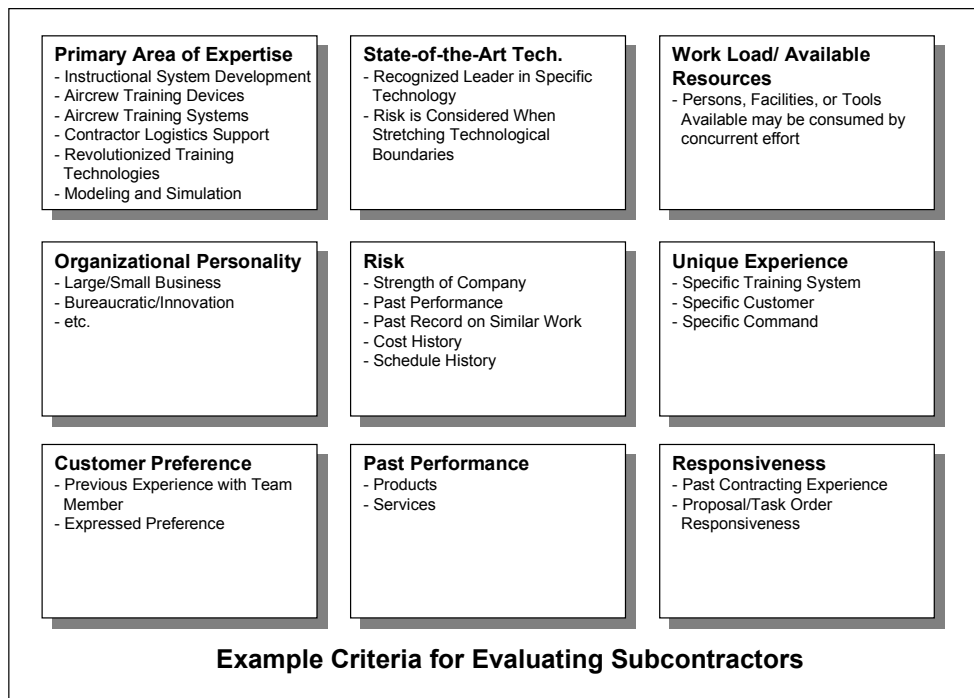


Figure 401-3. Example Criteria for Evaluating Subcontractors

Directing Subcontractors

SYTRONICS TSA II Program Manager, Mr. Timothy Choate, will lead the *SYTRONICS* team from our Dayton, OH facilities and will report directly to Mr. Barry Myers, President, *SYTRONICS*. Mr. Choate's prior extensive Air Force experience with training and operations has given him an in-depth understanding of the Training Systems Product Group (TSPG) requirements and the TSPG management processes. Mr. Choate has over 27 years of training experience including an assignment as the Air Force Operational Commander of the 3300th Training Support Group Detachment 1, a Master Instructor Pilot, Air Force Senior Pilot, FAA Commercial Pilot, and experience as a Program Manager for the T-1A, C-29A, C-26A, and the T-46A. More detailed information on Mr. Choate's operational Air Force career and extensive training experience is included in Table 401-3.

Mr. Choate completed a Master of Science Administration, Bachelor of Science Aerospace Engineering, and is a graduate of the USAF Instructional System Design course.

TABLE 401-3
RELEVANT EXPERIENCE FOR MR. TIMOTHY CHOATE, SYTRONICS TSA II PM

PROGRAM MANAGEMENT
<ul style="list-style-type: none"> • Directly involved in significant aspects of seven different source selections. Key leader in several politically-sensitive acquisitions, some involving international businesses. Extensive work in Concept Study, Full Scale Development, Non-Developmental Items, and Production phases of the acquisition process. • T-1A Deputy Program Manager--Developed detailed, comprehensive financial plan for the \$1.5B program. • C-29A Program Manager--Directed efforts of 22 personnel in executing all aspects of the \$100M acquisition. • Accomplished the FIRST Aeronautical Systems Center's 90-day aircraft source selection. • C-26A Program Manager--Hand-picked to lead General Randolph's FIRST streamlined aircraft source selection. • T-46A Chief, Business/Plans Division; Chief, Pilot Procedures/Crew Station Branch • Team leader supporting Program Director in SECAF-directed T-46A Contract Restructure. • Chief, Primary Trainer Evaluation program--Directed Congressionally-mandated aircraft "Fly-Off" program.
OPERATIONAL EXPERIENCE
COMMANDER, 3300TH TRAINING SUPPORT GROUP, DET 1, HQ AIR EDUCATION TRAINING COMMAND (AETC):
<ul style="list-style-type: none"> • Command representative to Aeronautical Systems Division SPOs providing operational expertise and guidance during acquisition of T-1A Training System, Joint Primary Aircraft Training System, and T-3A aircraft. • Articulated the command's philosophies, concepts of operation, and positions ensuring the new aeronautical training systems are compatible with the operational environment. • Defined the detailed interrelationships of Specialized Undergraduate Pilot Training operations to the SPO and contractor resulting in reestablishing an integrated schedule to support start of training.
CHIEF, OPERATIONAL REQUIREMENTS DIVISION, DCS FOR OPERATIONS AND READINESS, HQ ATC:
<ul style="list-style-type: none"> • Directed integrated team that determined the operational and training requirements for the \$1.7B T-1A Training System, the \$7B Joint Primary Aircraft Training System, and the \$40M T-3A Aircraft. • ATC's spokesperson to industry concerning operational, training, and technology requirements. • Successfully orchestrated the transition of ATC's flying Training Management System (TMS) to the next generation of information technology tools. • First Air Force aircrew qualified in T-1A type aircraft to be command subject matter expert for design and development of the T-1A Training System using the Training System Requirements Analysis process. • Co-led T-1A ground-based training system capability source selection evaluation team. Created T-1A source selection evaluation criteria and recommended operational personnel for source selection evaluation team.
CHIEF, T-46A TRAINING PROGRAMS, 3305TH SCHOOL SQ, DEPUTY COMMANDER FOR OPERATIONS, HQ ATC:
<ul style="list-style-type: none"> • Led multi-functional team in defining and implementing the T-46A GBTS design and master integrated schedule. Creative planning allowed for simultaneous delivery of aircraft and GBTS to start training. • Command's representative as T-46A Operational Flight Trainer Source Selection Evaluator. • Command author for T-37 aerodynamics and navigation courses. • Designed and authored T-37 courseware first--large scale effort to employ Computer-Assisted Instruction.
ASSISTANT FLIGHT COMMANDER, PILOT INSTRUCTOR TRAINING (PIT), UNDERGRADUATE FLYING TRAINING (UPT):
<ul style="list-style-type: none"> • Directly responsible for all aspects of PIT operations. • Supervised 15 Instructor Pilots and the daily training activities of 120 student pilots per year. Managed the expenditure of \$1.25 million dollars in annual operating costs. • Flight Standardization/Evaluation Officer. Wing Supervisor of Flying. Runway Supervisory Unit Controller. • Command's representative as T-46A aircraft Source Selection Evaluator--assessed operational effectiveness of aircraft to perform the primary flying training mission.
INTEGRATED PRODUCT TEAM
CHIEF, AIRCREW TRAINING TECHNICAL PLANNING INTEGRATED PRODUCT TEAM (TPIPT):
<ul style="list-style-type: none"> • Implementing Air Force Modernization Planning Process by leading multi-constituent team of 194 personnel from 5 MAJCOMs and AF Reserve/Guard to develop concept/solutions to the warfighter's deficiencies. • Key leader in developing the strategy for General Fogleman's "Revolutionizing Training in the Air Force." • Networking the military flying training units with relevant industry, Government laboratories, and academia capabilities allowing for innovative cooperation in concept/solutions to the operational command's needs. • Creating joint training initiatives by working with the Navy and Army technology organizations.

Task order managers, with full responsibility and authority to execute the technical and management plan, will be assigned to each task. *SYTRONICS*' philosophy is to assign the best person on the team without regard to company affiliation.

Figure 401-4 depicts the interfaces anticipated for the conduct of this program.

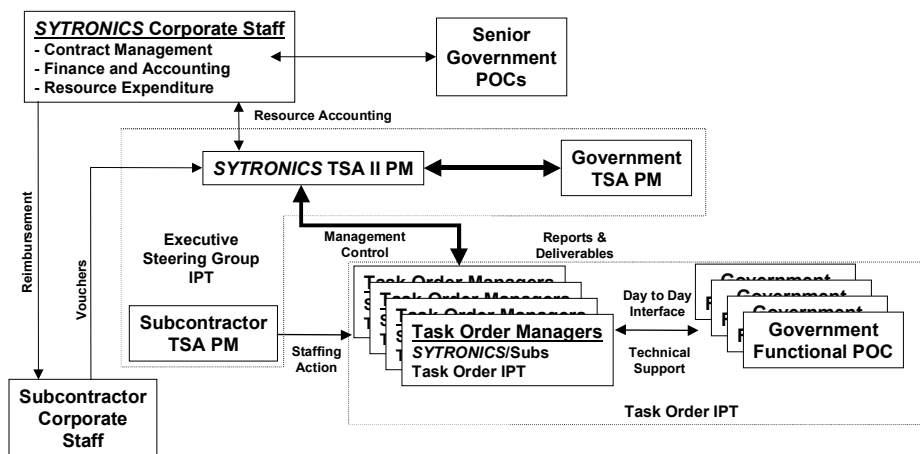


Figure 401-4. Program Interfaces

The most critical interfaces are between our task order managers and the customer, and the interface between our TSA II program manager and the task order managers--the latter to ensure quality of the product, adequacy of corporate support, and achievement of the customer's expectations. The experience of core *SYTRONICS* team members on similar programs is that the administrative burden of the Program Manager increases as the number of concurrent multiple task orders increases. As the total workload of our TSA II effort is not known at this time, we show the *SYTRONICS* Program Manager as the focal point for all program interfaces. As the program grows, we will augment our Program Manager with the appropriate program control personnel and other staff required to ensure successful program execution.

Task order managers will provide day-to-day performance management and accomplishment of assigned tasks. A senior technical representative from each contractor participating on the task will directly support each task order manager.

Subcontractor Coordination

SYTRONICS' approach to team information management is to keep lines of both programmatic and technical communications open at all times, within the propriety of protecting corporate unique information, to ensure positive joint response to our team's mission. Mr. Choate, as the TSA II Program Manager, will lead the Executive Steering Group IPT; and, through this IPT, maintain direct communications with a senior management counterpart at each subcontractor on the TSA team. In addition, all general TSA II information, including TSPG direction/policy, and information on future

tasks, will be received and posted on the *SYTRONICS* TSA II web site or transmitted via e-mail to all subcontractor representatives.

The Task Order Program Manager will be the leader of a top-level delivery order IPT comprised of customer-appointed representatives, senior technical representatives from task subcontractors, and second-tier, task-specific IPT leaders. This top-level IPT will meet at regular intervals, dependent upon the task, and will make maximum use of video/audio teleconferencing. This IPT will review contract status, work directives, subcontractor allocations, general task issues, and evaluations of the representatives of the team to the task requirements. Problem areas will be discussed in detail with resolution or workaround solutions identified. Projections of cost/schedule-to-complete will be presented, along with technical performance assessments. Additionally, the collection and monitoring of most program metrics will be done at this level. A program top risk list will be developed, maintained, and reported.

Although task order leaders must be kept informed of all aspects of the task order, direct technical-to-technical coordination will be encouraged for responsiveness and to clarify requirements. This is between both prime/subcontractor and Government/prime or Government/subcontractor personnel. However, when technical coordination results in an interpretation that could potentially change contractual requirements, the task order leader and *SYTRONICS* Program Manager (and *SYTRONICS* contracts personnel) must be informed and take appropriate contractual action.

Government technical requirements and contractual information regarding security issues, installation policies, etc., will be received and transmitted via facsimile or e-mail to all team member subcontractor representatives. Specialized information regarding a subcontractor or subcontract task will be communicated directly by voice, e-mail, and/or facsimile from *SYTRONICS* to the appropriate subcontractor technical lead. Such information might include requests for a work directive proposal, results of a work directive negotiation, questions on deliverables or invoices, personnel matters, etc. Since all *SYTRONICS* team members have e-mail capability between their corporate staff members and their local offices, in addition to having access via Internet to other offices and agencies throughout the United States, e-mail is and will continue to be used extensively for team coordination. Bi-monthly meetings with the subcontractor representatives/program managers include activities to review contract status, work directives, subcontractor allocations, problems of a general nature, and evaluations of the responsiveness to TSA II program requirements. Similarly, the task order manager will maintain communications with counterparts at each participating subcontractor.

Subcontractor Integration

Executing a task order may involve the efforts of multiple team members, include *SYTRONICS*, core Team members, subcontractor(s), and vendors. The efforts of these participants will usually be interdependent, potentially influencing each other's performance, schedule, and indirectly their costs. The integration of the contributions of these entities is accomplished through the use of the Task Order IPT. This IPT will consist of, at a minimum, the Task Order Manager (functioning as the IPT lead) and the senior technical representative of each subcontractor participating in the

effort. The *SYTRONICS* TSA II Program Manager and Government representatives may optionally participate. The IPT has multiple objectives. These include:

- Assuring that all participants understand the macro view of the effort, its schedule, its funding profile, and where their respective efforts fit in this macro view.
- Developing a sense of “ownership”/shared responsibility among the various IPT participants in the overall project.
- Determining the comprehensiveness of the documented interfaces between subordinate efforts, especially those that bridge between two contractors/subcontractors.
- Surfacing and resolving areas of functional conflict in the evolution of the product.
- Documenting the above for technical guidance, specific review at key decision points, and for use in lessons-learned in future similar efforts.

Risk issues that could jeopardize integration efforts may arise at any of the various steps in the subcontractor/vendor selection and execution process. This is especially true with programs that have staggered subcontractor/vendor efforts that may be at varying levels of execution. Each task order manager is required to have a risk identification and mitigation plan, and to address and update his/her plan periodically as a subset of the integrating function. Table 401-4 provides examples of the types or risk areas and mitigation actions that the TSA II Program Manager expects each Task Order Program Manager to identify and address:

TABLE 401-4
RISK AREAS VERSUS MITIGATION ACTIONS

RISK AREA	MITIGATION ACTIONS
Subcontractor/vendor unable to respond to RFP in timely manner	Issue solicitation to multiple sources, precede with telephone call.
No subcontractors/vendors able to meet specified requirements.	Maintain cognizance of state-of-the-art, apply in design phase. Allow iterative discussion between design team and potential suppliers.
Subcontractor performance is inadequate (technical, cost, or schedule).	On-going performance monitoring by Task Order Program Manager. Include means for corrective action in formal contract (including termination.)
Subcontractor unable to obtain required subsystem components	Require subcontractor specification of long lead items and appropriate schedule. Address at periodic subcontractor reviews.
Subcontractor ceases business operations.	Include subcontractor organization stability/strength in evaluation criteria. Include termination penalties in contract.
Subcontractor unresponsive to prime.	Specify managerial remedy process, and performance and schedule penalties in contract.
Subcontractor component unable to interface with other task elements	Explicitly include interfaces in subcontract specifications. Include comprehensive testing during development.

Controlling Subcontractors

Controlling is a management function that includes setting standards, measuring performance, and correcting deviations. *SYTRONICS* has in place processes to assist the TSA II Program Manager, Task Order Program Manager, and

subcontracts management personnel in the controlling function. These processes will be described in this section. Each controlling management function is addressed from a program, task, and contractual perspective.

Setting Standards

SYTRONICS remains responsible for the overall program performance, whether tasks are subcontracted or performed internally. The *SYTRONICS* mechanism of meeting this corporate program responsibility is to impose the overall planning, execution, and control responsibility on the *SYTRONICS* TSA II Program Manager. He will be given documented program goals directly from the *SYTRONICS* President.

Each Task Order Program Manager has final overall responsibility for the Task Order, and they will, in turn, look to each principal task contractor representative for intermediate management responsibility for execution of the task contract and for all deliverables from their respective companies. These contractor representatives will be responsible for achieving all contract objectives assigned to their respective companies, including cost, schedule, and technical performance.

Ms. Rebecca Rogers, *SYTRONICS* Contracts Manager, will be *SYTRONICS* interface to the Training System Products Group contracting officer, and has the responsibility to ensure the Team's full compliance with specified contract reporting CDRLs.

Measuring Performance

At monthly Program Management Reviews (PMRs), the *SYTRONICS* President, to whom the TSA II Program Manager reports directly, will review the TSA II contract status. Aspects to be considered include meeting customer-stated requirements (technical, cost, and schedule), responsiveness of subcontractors to delivery schedules and *SYTRONICS* guidance, compliance with relevant corporate procedures and policies (such as personnel staffing, cost reporting, subcontractor selection, and risk assessment), and attainment of corporate goals, such as indirect expense control. If subcontractor responsiveness is a potential execution issue, the *SYTRONICS* President will engage senior management in the subcontractor/vendor organization.

The *SYTRONICS* TSA II Program Manager will evaluate performance on each Task Order. In evaluating the progress of each Task Order towards customer requirements, he will apply cost, schedule, and or delivery performance criteria that will be used to measure subcontractor/vendor activities and determine progress. *SYTRONICS* uses a web-based performance measurement tool. This allows the prime, subcontractors, and the Government to check real-time on subcontractor and Task Order progress. A description of the process is included in Figure 401-5.

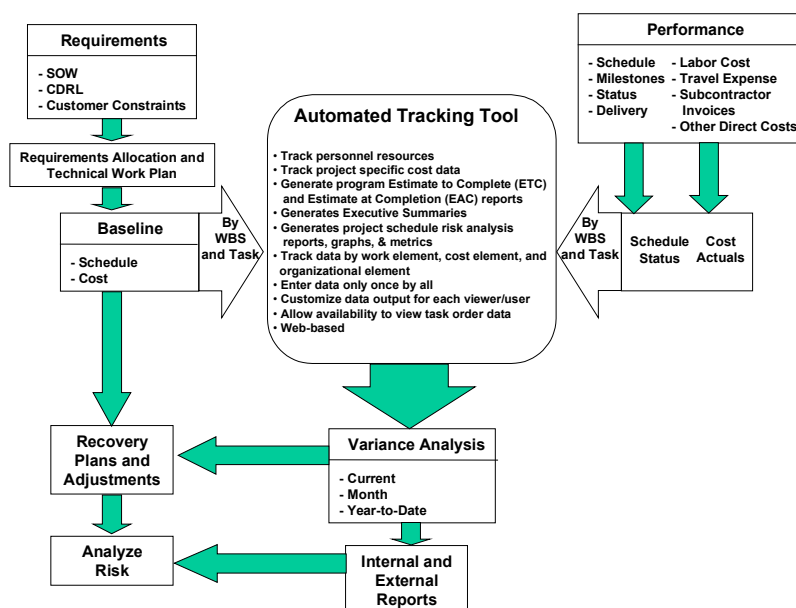


Figure 401-5. *SYTRONICS* Performance Measurement Process

Tracking of the program is undertaken as an integral part of *SYTRONICS*' performance reporting system. All aspects of the program will eventually become work packages and will be tracked by measurable events and resource expenditures. These measured events will provide clear management indicators of current status and of future needs. The end objective of performance measurement at *SYTRONICS* is to forecast and resolve problems before they impact on task/program performance. Consequently, a major portion of the performance measurement process is an update of the task's risk assessment.

In the area of contractual compliance/measurement, the primary sources of information are formal Cost and Performance Reports, invoices, and deliverables' letters of transmittal (and Government acceptance if included in the Government process). These documents all flow through the prime contractor and will be logged into the *SYTRONICS* contract management database as they are forwarded (or consolidated for forwarding) to the Government. These contractual compliance indicators will be monitored and reviewed on a monthly basis.

Controlling Quality

SYTRONICS will ensure the quality of its subcontractor's products and processes by selecting subcontractors that already have established documented procedures and policies in place as well as independent certification that they use them. Subcontractors must be ISO 9001 compliant. Evidence of Software Engineering Institute (SEI) Capability Maturity Model (CMM) process compliance is a plus.

Additionally, *SYTRONICS* will require a Quality Assurance Plan for each subcontracted effort. This plan will detail how the subcontractor plans to ensure quality in the products they deliver. The subcontractor will also include a monthly Quality Assurance Report (QAR) from their independent quality compliance organizations detailing the execution of this plan.

As necessary, *SYTRONICS* will perform on-site inspections and audits of its subcontractors. For efforts where large parts of an effort are subcontracted *SYTRONICS* may also elect to place an employee on-site at the subcontractors facilities in order to ensure compliance with quality requirements.

Corrective Actions

Management actions can again be viewed at the program, task, and contractual compliance levels. Actions that impact at the program level include implantation and/or revision of policies and procedures, or, in extreme cases, change of senior management personnel.

Actions appropriate at the task level include realignment/redistribution of resources, direct consultation/interaction with appropriate subcontractor management personnel, and intervention in task leader roles. Technical personnel changes and/or augmentation are also candidate actions.

Contractual compliance may require formal subcontract correspondence to remind/highlight requirements to subcontractors, or, in extreme cases, termination and re-issuance of specific subcontracted efforts. Before such actions are taken, *SYTRONICS* would engage in discussions with appropriate Government representatives on the technical scope, schedule, or resource needs of specified tasks.

In all cases, *SYTRONICS'* corrective actions will include entry and tracking of deficiency resolution until problems and issues are resolved and non-recurrence is ensured.